

**REMARKS**

The Examiner is thanked for the withdrawal of the previous rejections and for the thorough examination of the present application. Claims 1-22 and 28 remain in the application. Claims 1-3 and 20-22 were amended according to the Examiner's suggestions to overcome the noted informalities.

The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

**I. Independent Claims 2, 3, 21, and 22 and Related Dependent Claims are Patentable**

The Examiner rejected independent claims 2, 3, 21, and 22 as anticipated by U.S. Patent No. 5,734,808 to Takeda ("Takeda"). The MPEP § 2131 defines the standard for anticipation as follows:

The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Examiner notes that Takeda discloses at column 2, lines 55-60 the following:

each of the pipeline control means comprises:

means for permitting data transfer to one pipeline register among the plurality of pipeline registers only when there is processing data in a pipeline register in a stage previous to the one pipeline register, when the pipeline drive signal has been enabled.

The Examiner then asserts that "Takeda discloses the pipeline control means permitting data transfer only when there is processing data in a pipeline register in a previous stage, and thus a stall or equivalent would inherently be implemented in a preceding signal processing unit."

In other words, Takeda requires there must be data in the preceding pipeline register before the data may be transferred to the one pipeline register. No such limitation is recited in independent claim 2, for example, which recites in part, "a control line to which each signal processing unit is connected, the control line communicating flow control information to stall at least one of the preceding signal processing units for feedback control of the signal processing units."

Takeda fails to disclose the claimed control line because its operational trigger is different, and Takeda also fails to disclose the pipeline control means providing feedback control of the signal processing units. As such, the *prima facie* case of anticipation fails because the identical invention is not shown in as complete detail as is contained in the claims since the elements cited by the Examiner fail to read on each and every claimed element and/or relationships between claimed elements. Independent claim 21 recites elements similar to claim 2.

In addition, independent claim 3, for instance, recites in part, "a control line to which each signal processing unit is connected, the control line communicating flow control information to stall at least one of the signal processing units following in the signal processing chain for feedforward control of the signal processing units." As Takeda discloses control by the pipeline control means of only the "one pipeline register," then Takeda fails to disclose a control line providing feedforward control of multiple signal processing units as is claimed. Consequently, the *prima facie* case of anticipation fails because the identical invention is not shown in as complete detail as is contained in the claims since the elements cited by the Examiner fail to read on each and every claimed element. Independent claim 22 recites elements similar to claim 3.

Accordingly, it is submitted that independent claims 2, 3, 21, and 22 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

**II. Independent Claims 1 and 28 and Related Dependent Claims are Patentable**

The Examiner rejected independent claims 1 and 28 as rendered obvious by U.S. Patent No. 6,457,087 to Fu ("Fu") in view of Takeda. The MPEP § 2142 states the following:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the

applicant is under no obligation to submit evidence of nonobviousness.

In addition, the MPEP § 2141.02 states the following:

Ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language, and considering both the invention and the prior art references as a whole.

The Examiner notes that Fu discloses at column 13, line 61 through column 4, line 5, the following:

Each control signal 282 can operate in either a transmit mode or a receive mode. A control signal 282 is in transmit mode when its associated device (e.g., CIU, BBU, FCU, or MCU) is driving the data bus and transmitting data. A control signal 282 is in the receive mode when its associated device (e.g., CIU, BBU, FCU, or MCU) is listening to the data bus and receiving data. The control signals 282 in either mode are time multiplexed into four control bits per packet. The control bits that are sent in transmit mode are referred to as transmit mode control bits and the control bits that are sent in receive mode are referred to as receive mode control bits.

However, such fails to read on the recited monitor line because there is no indication that the cited control signals switches the cited signal processing units between a transmit mode and a receive mode.

For example, claim 1, recites in part, "a mode line connected to each signal processing unit for switching each signal processing unit between a transmit mode and a receive mode." In other words, the signal processing units are switched by the claimed mode line and Fu does not disclose this.

It is noted that the standard outlined in MPEP 2112 § IV states, "the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic," and/or, "in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." As all the recitations of the claim were not met, the *prima facie* case of obviousness fails for not considering the invention as a whole as required by MPEP § 2141.02. If all of the elements are considered present, then the *prima facie* case of obviousness fails because one of the elements, the mode line, relies on an unsubstantiated inherency argument, which is improper in view of MPEP 2112 § IV. Independent claim 28 recites elements similar to claim 1.

The Examiner also notes the following:

Takeda teaches that it is well known in the art to use a flow control line to communicate flow control information in a transmit mode to one of preceding signal processing units. Takeda teaches a pipeline processing device wherein he teaches sequential transfer of data and communicating flow control information in a transmit mode to at least one of the preceding signal processing units (col. 2, lines 55-60; col. 3, lines 50-64; teaches processing data transferred only when there is processing data in the previous stage).

In contrast, independent claim 1, for instance, recites in part, "a control line to which each signal processing unit is connected, the control line communicating

flow control information either in the transmit mode to at least one of the preceding signal processing units or in the receive mode to at least one of the following signal processing units." As the Examiner has only argued one side of the "or," the other side is not disclosed by the hypothetical combination. Stated another way, the claimed control line has two states that provide two different actions, which Takeda does not disclose. Therefore, the *prima facie* case of obviousness fails because the invention is not shown in as complete detail as is contained in the claims since the elements cited by the Examiner fail to read on each and every claimed element and/or claimed relationships between elements. Independent claim 28 recites elements similar to claim 1.

Accordingly, it is submitted that independent claims 1 and 28 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

### **III. Independent Claim 20 is Patentable**

The Examiner rejected independent claim 20 as rendered obvious by Takeda in view of U.S. Patent No. 7,017,064 to Thomas et al. ("Thomas").

The Examiner notes the following:

Takeda teaches a pipeline processing device wherein he teaches sequential transfer of data and communicating flow control information in a transmit mode to at least one of the preceding signal processing units (col. 2, lines 55-60; col. 3, lines 50-64; teaches

processing data transferred only when there is processing data in the previous stage).

In contraposition, independent claim 20 recites in part, "a control line to which each signal processing unit is connected, the control line communicating flow control information either in the transmit mode to at least one of the preceding signal processing units or in the receive mode to at least one of the following signal processing units." As the Examiner has only argued the one side of the "or," the other side is not disclosed by the hypothetical combination. Stated another way, the claimed control line has two states that provide two different actions, which Takeda does not disclose. Therefore, the *prima facie* case of obviousness fails because the invention is not shown in as complete detail as is contained in the claims since the elements cited by the Examiner fail to read on each and every claimed element and/or claimed relationships between elements. Accordingly, it is submitted that independent claim 20 is patentable over the prior art.

#### IV. CONCLUSIONS

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should a fee be required please charge Deposit Account 50-0510. Should any extensions of time be required, please

In re Patent Application of  
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consider this a petition thereof and charge Deposit Account  
50-0510 the required fee.

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Respectfully submitted,  
/ido tuchman/  
Ido Tuchman, Reg. No. 45,924  
Law Office of Ido Tuchman  
82-70 Beverly Road  
Kew Gardens, NY 11415  
Telephone (718) 544-1110  
Facsimile (718) 374-6092